

Professional Series



Green
Power



Environmental
Friendly



Energy
Saving



Thor Series

Industrial Type True Double Conversion
Online UPS



- True Online Double Conversion with DSP Control
- Robust Electrical Performance
- Screwless Cabinet Design
- Full PCBAs Coating to Withstand Harsh Environment
- Unique Ventilation Design for Effective Heat Dissipation
- Available in Power Factor 0.8 / 0.9
- Flexible Battery Configuration Adapts Different Applications
- Accepts Dual-Mains Input
- Parallel Capability up to 4 units
- Comes with Modbus RS-232/RS 485, Dry Contacts, SNMP Slots & Power Management Software



• Software •



• 2 Years •
Warranty



True Online Double Conversion with DSP Control

Double isolation between input/output, battery and bypass is applied to totally isolate power line noise, spikes and transients. A Digital Signal Processor (DSP) control provides an improved solution with high performance

Robust Electrical Performance

This UPS is designed to accept wide input voltage and frequency range to cope with the worst utility conditions. It can eliminates harmful distortion from utility power and withstand all kinds of severe impacts from various load. It is capable to support heavy duty equipment, production equipment and DCS (Distributed Control System) system.

Screwless Cabinet Design & Fully Coating PCBAs to Withstand Harsh Environment

The outside cabinet is designed only with locks without any screws and all PCBAs are coated for anti-moisture, anti-electrical leakage, anti-dust and anti-corrosion. Its robust design is suitable for high temperature, high humidity, dusty, salty and vibrated of harsh environment.

Unique Ventilation design for Effective Heat Dissipation

Unique ventilation design allows heat flowing to top as natural convector Therefore, the UPS cabinets can be added in parallel side by side for space-saving.



Flexible Battery Configuration adapts different Applications

Battery numbers can be adjusted flexibly according to different power demands.

Accepts Dual-Main Inputs

This UPS series is allowed to connect two separate power inputs to increase operation reliability.

Front Access Makes Maintenance & Replacement Easy

An important consideration has been given to allow access to the unit's electronic cards and power components. All the boards are accessible by the front panel for easy maintenance and replacement.

High Short-Circuit and Overload Capabilities

UPS is built-in with high short-circuit protection. Once short-circuit occurs, this protection device will be activated. The load will stay protected and the UPS will remain intact. High overload protection supports 110% for 60 minutes and 125% for 10 minutes.

Easy integration into Existing Electrical Networks or Generator

This UPS allow either top or bottom wiring connection depending on various environment condition. This UPS is fully compatible with generator.

Parallel Capability up to 4 units

Up to 4 units in parallel can be operated without adding additional hardware, increasing system capacity as well as operation reliability for power redundancy.



*Specification subjects to change without prior notice

Professional Series



RIGHT POWER

The Power Of Continuity

Technical Specification:

MODEL	THOR T* 10KS	THOR T* 15KS	THOR T* 20KS	THOR T* 30KS	THOR T* 40KS	THOR T* 60KS	THOR T* 80KS	THOR T* 100KS	THOR T* 120KS	THOR T* 160KS	THOR T* 200KS	THOR T* 250KS	THOR T* 300KS	THOR T* 400KS		
CAPACITY (KVA)	10KVA / 8KW	15KVA / 12KW	20KVA / 16KW	30KVA / 24KW	40KVA / 32KW	60KVA / 48KW	80KVA / 64KW	100KVA / 80KW	120KVA / 96KW	160KVA / 128KW	200KVA / 160KW	250KVA / 200KW	300KVA / 240KW	400KVA / 320KW		
INPUT																
NOMINAL VOLTAGE	3 x 380VAC/400VAC/415VAC (3P + N or 3P + N + G)															
ACCEPTABLE VOLTAGE RANGE	304VAC ~ 456VAC															
FREQUENCY RANGE	50Hz ± 5 Hz (± 10%)															
PHASE	3-Phase in / 3-phase out															
INPUT CONNECTION TYPE	Hard Wire 4-wire (3Ph + G), Hard Wire 5-wire (3Ph+N+G)															
OUTPUT																
NOMINAL VOLTAGE	3 x 380VAC/400VAC/415VAC (Selectable)															
OUTPUT POWER FACTOR	0.8															
FREQUENCY	50Hz ± 1%															
FREQUENCY SYNCHRONISATION RANGE	± 5Hz (Equal to bypass working range)															
FREQUENCY SYNCHRONISATION SPEED	1 ~ 2 Hz/s															
OUTPUT VOLTAGE STABILITY	STEADY STATE	± 1%														
	TRANSIENT STATE	± 5%														
WAVEFORM	Pure Sinewave															
LOAD CREST FACTOR	3 : 1															
TOTAL HARMONIC DISTORTION (THDV)	< 2% (Linear Load) ; < 4% (Non-linear Load)															
DYNAMIC IN-RUSH VOLTAGE RANGE	0% -> 100% -> 0% (R Load) < ± 5% ; 20% -> 100% -> 20% (R Load) ± 3%															
DYNAMIC RECOVERY TIME (III Grade)	0% ~ 100% RCD load : < 60 ms recover to 90% of nominal voltage															
PHASE DISPLACEMENT	120° ± 1% (balanced load) ; 120° ± 2% (imbalances 50% of the load)															
TRANSFER TIME	0 ms															
OVERLOAD CAPABILITY	0% ~ 110% continuous running; 110% ~ 150% for 10 min ~ 1 min; > 160% for 200ms															
SHORT CIRCUIT CAPABILITY	60 ~ 100ms															
TRANSIENT RESPONSE TIME	< 5ms															
OUTPUT CONNECTION	Hardwire 5-wire (3P+N+G)															
BYPASS																
CONNECTION TYPE	Hardwire 5-wire (3P+N+G)															
INPUT VOLTAGE RANGE	220VAC ± 25%															
OVERLOAD CAPABILITY	1.5 In ~ 1.8 In 1h ~ 30s															
SHORT CIRCUIT CAPABILITY	1.8 In ~ > 2.0 In 30s ~ 200ms															
BATTERY & CHARGER																
RECTIFIER	TYPE	6 Pulse						6 Pulse or 12 pulse								
	RATED OUTPUT VOLTAGE	384 VDC														
	CHARGER VOLTAGE	395VDC - 435VDC (Adjustable)														
BATTERY	CHARGING CURRENT (Max)	20A			40A				50A			70A				
	TYPE	Sealed Lead Acid Maintenance Free Battery														
	NUMBERS	12VDC x 32 pcs (29 ~ 32 pcs adjustable)														
	REVERSE DIODE	No														
	COLD START	Yes														
SYSTEM																
EFFICIENCY (At Linear Load)	90%			91%				92%				93%				
ECO MODE (Non-Parallel Models)	Yes															
EPO FUNCTION	Yes															
STANDARD	IEC 61000-4-5 Protection surge, IEC 62040-2 EMC/EMI, IEC 62040-1 Safety															
COMMUNICATION																
POWER MANAGEMENT SOFTWARE	Support Window Family, Linux and MAC															
	- Automatically Shut-down, Saves Application Data Before Exit - Power Flow Display for Monitoring UPS Status - Schedules System Shutdown/Restart - Warning Notification Via E-Mail/Pager/Broadcast - Remote Monitor/Control via LAN - Safety Shutdown Multi System - Records Logs for Analysis															
INTERFACE	Modbus RS-232/RS485															
DRY CONTACTS	6 Outputs and 2 Inputs															
SNMP SLLLOT	Yes															
ENVIRONMENT																
OPERATING TEMPERATURE	0 ~ 35°C continuous running, 40°C 8-hour running at nominal input voltage, recharging batteries and no overload, 45°C derating to 85% with linear load															
HUMIDITY	0 ~ 90% (non-condensing)															
NOISE LEVEL	< 70dB @ 1 Meter											< 72dB @ 1 Meter				
PHYSICAL																
IP PROTECTION	IP20 (default), IP21/IP31 (Option)															
DIMENSION (D x W x H mm)	800 x 800 x 1800						800 x 1200 x 1800			800 x 1600 x 1800			850 x 1630 x 1900		900 x 1700 x 1900	
WEIGHT (KG)	350	370	420	450	480	730	790	1000	1300	1400	1700	1900	2300	2500		

*Specification subjects to change without prior notice





Green Power



Environmental Friendly



Energy Saving

Technical Specification:

MODEL	THOR 9 ⁺ 100KS	THOR 9 ⁺ 120KS	THOR 9 ⁺ 160KS	THOR 9 ⁺ 200KS	THOR 9 ⁺ 250KS	THOR 9 ⁺ 300KS	THOR 9 ⁺ 400KS	THOR 9 ⁺ 500KS	THOR 9 ⁺ 600KS	THOR 9 ⁺ 800KS
CAPACITY (KVA)	100KVA / 90KW	120KVA / 108KW	160KVA / 144KW	200KVA / 180KW	250KVA / 225KW	300KVA / 270KW	400KVA / 360KW	500KVA / 450KW	600KVA / 540KW	800KVA / 720KW
INPUT										
NOMINAL VOLTAGE	3 x 380VAC/400VAC/415VAC (3P + N or 3P + N + G)									
ACCEPTABLE VOLTAGE RANGE	304VAC ~ 456VAC									
FREQUENCY RANGE	45Hz ~ 65Hz									
PHASE	3-Phase in / 3-phase out									
OUTPUT										
NOMINAL VOLTAGE	3 x 380VAC/400VAC/415VAC (Selectable)									
OUTPUT POWER FACTOR	0.9									
CREST FACTOR	3:1									
FREQUENCY	50 Hz or 60 Hz (Selectable)									
FREQUENCY STABILITY	± 0.05%									
FREQUENCY SYNCHRONISATION RANGE	±5Hz (Equal to bypass working range)									
FREQUENCY SYNCHRONISATION SPEED	1 ~ 2 Hz/s									
OUTPUT VOLTAGE STABILITY	STEADY STATE									
	TRANSIENT STATE									
WAVEFORM	Pure Sinewave									
TOTAL HARMONIC DISTORTION (THDV)	<1% (Linear Load); <3% (Non-linear Load)									
DYNAMIC IN-RUSH VOLTAGE RANGE	0%~>100%->0% load : ≤1%									
DYNAMIC RECOVERY TIME (III Grade)	0%~100% RCD load : <20 ms recover to 90% of nominal voltage									
PHASE DISPLACEMENT	120° ±1%									
TRANSFER TIME	0 ms									
OVERLOAD CAPABILITY	110% for 60 minutes, 125% for 10 minutes, 150% for 1 minute, 200% for 7 seconds									
SHORT CIRCUIT CAPABILITY	180% for 1 second									
TRANSIENT RESPONSE TIME	< 10ms									
OUTPUT CONNECTION	Hardwire 5-wire (3P+N+G)									
BYPASS										
CONNECTION TYPE	Hardwire 5-wire (3P+N+G)									
INPUT VOLTAGE RANGE	220VAC ± 15% (setting range ±10% ~ ±25%)									
OVERLOAD CAPABILITY	110% for 60 minutes, 125% for 10 minutes, 150% for 1 minute									
SHORT CIRCUIT CAPABILITY	1 second (Rated*7), 500 ms (Rated*8), 200 ms (Rated*9), 100 ms (Rated*10), 100 ms (Rated*14)									
BATTERY & CHARGER										
RECTIFIER	TYPE									
	RATED OUTPUT VOLTAGE									
	CHARGER VOLTAGE									
BATTERY	CHARGING CURRENT (Max)									
	TYPE									
	NUMBERS									
REVERSE DIODE										
COLD START										
SYSTEM										
EFFICIENCY (At Linear Load)	93%		93.50%			93%		94.50%		
ECO MODE (Non-Parallel Models)	Yes									
EPO FUNCTION	Yes									
STANDARD	IEC 60529, IEC 60664, IEC 60755									
COMMUNICATION										
POWER MANAGEMENT SOFTWARE	Support Window Family, Linux and MAC									
	- Automatically Shut-down, Saves Application Data Before Exit - Power Flow Display for Monitoring UPS Status - Schedules System Shutdown/Restart - Warning Notification Via E-Mail/Pager/Broadcast - Remote Monitor/Control via LAN - Safety Shutdown Multi System - Records Logs for Analysis									
INTERFACE	Modbus RS-232/RS485									
DRY CONTACTS	3 Outputs and 2 Inputs									
SNMP SLOTT	Yes									
ENVIRONMENT										
OPERATING TEMPERATURE	0~ 35°C continuous running, 40°C 8-hour running at nominal input voltage, recharging batteries and no overload, 45°C derating to 85% with linear load									
HUMIDITY	0~90% (non-condensing)									
NOISE LEVEL	Less than 65 - 70dB @ 1 Meter									< 72dB @ 1M
PHYSICAL										
IP PROTECTION	IP20									
DIMENSION (D x W x H mm)	850 x 800 x 1900		850 x 1000 x 1900			1000 x 1500 x 1900		1000 x 2100 x 1900		1000 x 3200 x 1900
WEIGHT (KG)	656	700	800	910	1000	1400	1700	2100	2400	3950

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